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Attorney Docket No.: PATENT
SONY-27800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:) Art Unit: 2817
Iain Christopher Butler) Examiner: Choe, Henry
Serial No.: 10/805,050)
Filed: March 18, 2004) <u>TRANSMITTAL LETTER</u>
For: HIGH-SPEED LOW-POWER) 162 N. Wolfe Road
DYNAMIC CURRENT) Sunnyvale, CA 90486
BIASED OPERATIONAL) (408) 530-9700
AMPLIFIER)
) Customer No. 28960

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed please find a Information Disclosure Statement, Form PTO-1449, including copies of the references contained thereon, and a check in the amount of \$180.00 to cover the information disclosure fee for filing with the U.S. Patent and Trademark Office.

The Commissioner is hereby authorized to charge any additional fee or credit overpayment to our Deposit Account No. 08-1275. **An originally executed duplicate of this transmittal is enclosed for this purpose.**

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180.00 DP

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: December 5, 2005

By: *Jonathan O. Owens*
Jonathan O. Owens
Reg. No.: 37,902

Attorneys for Applicants

CERTIFICATE OF MAILING (37 CFR § 1.8(a))

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450

HAVERSTOCK & OWENS LLP.

Date: 12-5-05 By: *Jon P. Runk*



PATENT
Attorney Docket No.: SONY-27800

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In re Application of:

Iain Christopher Butler

Serial No.: 10/805,050

Filed: March 18, 2004

For: **HIGH-SPEED LOW-POWER
DYNAMIC CURRENT BIASED
OPERATIONAL AMPLIFIER**

) Group Art Unit: 2817

) Examiner: Choe, Henry

) **INFORMATION DISCLOSURE
STATEMENT**

) 162 N. Wolfe Road
) Sunnyvale, CA 94086
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Sir:

The citations listed below, copies attached, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

Applicant has become aware of the following printed publications which may be material to the examination of this application:

- U.S. Publication No. 2002/0036519 A1;
- U.S. Patent No. 4,284,957;
- U.S. Patent No. 4,335,355;
- U.S. Patent No. 5,084,683;
- U.S. Patent No. 6,462,695 B1;
- U.S. Patent No. 6,504,432 B1;
- U.S. Patent No. 6,529,069;
- U.S. Patent No. 6,552,676 B1;
- Japan Patent No. 22119314;

- European Patent No. 0 375 017;
- IEEE Transactions on Circuits and Systems, Vol 40, No. 4, April 1993, Pages 258-262, “ Highly Linear Voltage-Controlled CMOS Transconductors” Stainslaw Szczepanski, Adam Wyszynski, Rolf Schaumann;
- Peter Peregrinus Lts, 1998, Chapter 5.3, Page 193, “Analogue IC Design: the current-mode approach” C. Toumazou, F.J. Lidgey, D.G. Haigh;
- IEEE Journal of Solid State Circuits, Vol. 24, No. 3, June 1989, Page 803, “High Frequency Fully Differential Filter Using Operational Amplifiers Without Common-Mode Feedback”, Germano Nicollini, Francesco Moretti, Mauro Conti;
- IEEE Journal of Solid State Circuits, Vol. 34, No. 7, July 1999, Page 921, “A 16m W, 120dB Linear Switched Capacitor Delta-Sigma Modulator with Dynamic Biasing”, Dan Kasha, Wai Lee, Axel Thomsen;
- ISPLED 1998, August 10-12 1998 Monterey, CA USA, Page 203. “ On the Optimum Design of Regulated Cascode Operational Transconductance Amplifiers” Thomas Burger, Quiting Huang;
- IEEE Journal of Solid State Circuits, Vol.25, No. 6, December 1990, Page 1379, “ A Fast Settling CMOS Op Amp for SC Circuits with 90dB DC Gain”, Klass Bult, Govert Geelen;
- IEEE Journal of Solid State Circuits, Vol 33, No. 12, December 1998, Page 2010, “A High-Swing CMOS Telescopic Operational Amplifier”, Kush Gulati, Hai-Seung Lee;
- IEEE Journal of Solid State Circuits, Vol 17, No. 3, June 1982, Page 522, “Adaptive Biasing CMOS Amplifiers”, Marc Degrauwe, Jozef Rijmenants, Eric Voltz, Hugo De Man;
- IEEE Journal of Solid State Circuits, Vol. 20, No. 6, December 1985, Page 1122, “A High- Performance Micropower Switched Capacitor Filter”, Rinaldo Castello, Paul Gray;
- IEEE Journal of Solid State Circuits, Vol. 24, No. 3, June 1989, Page 744, “A Very-High-Slew-Rate CMOS Operational Amplifier “, R. Klinke, B. Hosticks, H Pfleiderer;
- IEEE Journal of Solid State Circuits, Vol. 34, No. 2, February 1999, Page 134, “An Integrated Low-Voltage Class AB CMOS OTA”, Ramesh Harjani, Randy Heineke, Feng Weng;

- IEEE Journal of Solid State Circuits, Vol. 15, October 1980, Page 887, Dynamic CMOS Amplifiers “, Bedrich Hosticka; and
- IEEE Journal of Solid State Circuits, Vol. 17, No. 3, June 1982, Page 499, “Real-Time Programmable Low Power SC Bandpass Filter”, B. Hosticka, D. Herbst, B. Hoeflinger, U. Kleine, J. Pandel, R. Schweer.

This Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that anyone or more of these citations constitutes prior art.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: December 5, 2005

By: Jonathan O. Owens
Jonathan O. Owens
Reg. No.: 37,902

Attorneys for Applicant

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HAVERSTOCK & OWENS LLP.

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(Modified)U.S. Department of Commerce
Patent and Trademark Office

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Include Serial Sheets If Necessary)

Applicant: Iain Christopher Butler

(37 CFR § 1.98(b))

Filing Date: March 18, 2004

Group Art Unit: 2817

U.S. PATENT DOCUMENTS

Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
	AA	US 2002/0036519 A1	03/28/02	Krishnapura et al.	327	65	02/05/01
	AB	4,284,957	08/18/81	Hague	330	253	09/28/79
	AC	4,335,355	06/15/82	Hague	330	253	02/13/81
	AD	5,084,683	01/28/92	Nicollini	330	107	08/31/01
	AE	6,462,695 B1	10/08/02	Ahuja et al.	341	161	08/31/01
	AF	6,504,432 B1	01/07/03	Rokhsaz	330	258	03/30/01
	AG	6,529,069	03/04/03	Krishnapura	327	552	02/05/01
	AH	6,552,676 B1	04/22/03	Bjorksten et al.	341	143	09/14/01
	AI						

FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation	
							Yes	No
	AJ	JP2219314	08/31/90	JP	H03H	19/00		X
	AK	0 375 017	06/27/90	EP	h03H	19/00		X

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

	AL	IEEE Transactions on Circuits and Systems, Vol. 40, No. 4, April 1993, Page 258-262, "Highly Linear Voltage-Controlled CMOS Transconductors", Stanslaw Szczepanski, Adam Wyszynski, Rolf Schaumann
	AM	Peter Peregrinus Ltd, 1998, Chapter 5.3, Page 193, "Analogue IC Design: the current -mode approach", C. Toumazou, F.J.Lidgley, D.G. Haigh
	AN	IEEE Journal of Solid State Circuits, Vol. 24, No. 3, June 1989, Page 803, "High-Frequency Fully Differential Filter Using Operational Amplifiers Without Common-Mode Feedback", Germano Nicollini, Francesco Moretti, Mauro Conti
	AO	IEEE Journal of Solid State Circuits, Vol. 34, No. 7, July 1999, Page 921 "A 16mW, 120dB Linear Switched Capacitor Delta-Sigma Modulator with Dynamic Biasing", Dan Kasha, Wai Lee, Axel Thomsen
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	AT	IEEE Journal of Solid State Circuits, Vol. 20, No. 6, December 1985, Page 1122, "A High- Performance Micropower Switched Capacitor Filter", Rinaldo Castello, Paul Gray
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Examiner:

Date Considered:

EXAMINER:

Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.